

Claims

- [c1] 1.A tip shroud for use with a bucket of a turbine, comprising:
a seal rail;
said seal rail comprising a middle portion; and
a cutter tooth mounted on said seal rail;
said cutter tooth positioned about said middle portion of said seal rail.
- [c2] 2.The tip shroud of claim 1, wherein said cutter tooth comprises a first cutter tooth and a second cutter tooth.
- [c3] 3.The tip shroud of claim 2, wherein said first cutter tooth and said second cutter tooth comprise an offset position about said middle portion of said seal rail.
- [c4] 4.The tip shroud of claim 1, wherein said cutter tooth comprises a top portion and a base portion.
- [c5] 5.The tip shroud of claim 4, wherein said cutter tooth comprises a built-up area adjacent to said base portion.
- [c6] 6.The tip shroud of claim 2, wherein said first cutter tooth comprises a first top portion and a first base portion and said second cutter tooth comprises a second

top portion and a second base portion.

- [c7] 7.The tip shroud of claim 6, wherein said seal rail comprises a length of about 4.0 to about 4.25 inches (about 101.6 to about 107.95 millimeters).
- [c8] 8.The tip shroud of claim 7, wherein said first top portion and said second top portion comprise a height of about 0.52 to about 0.54 inches (about 13.2 to about 13.72 millimeters).
- [c9] 9.The tip shroud of claim 7, wherein said first top portion and said second top portion comprise a width of about 0.10 to about 0.13 inches (about 2.54 to about 3.3 millimeters).
- [c10] 10.The tip shroud of claim 7, wherein said first cutter tooth is positioned about 2.15 to about 2.20 inches (about 54.61 to about 55.88 millimeters) from a first end of said seal rail while said second tooth may be about 2.13 to about 2.18 inches (about 54.1 to about 55.37 millimeters) from said first end.
- [c11] 11.The turbine shroud of claim 7, wherein said first base portion of said first cutter tooth may extend in a direction perpendicular to said seal rail of about 0.56 to about 0.58 inches (about 14.22 to about 14.73 millimeters) while said second base portion of said second cut-

ter tooth may extend about 0.45 to about 0.47 inches (about 11.43 to about 11.94 millimeters).

[c12] 12.The turbine shroud of claim 7, wherein said first base portion and said second base portion comprise a width along the direction of said seal rail from about 0.50 to about 0.52 inches (about 12.7 to about 13.2 millimeters) to about 0.30 to about 0.32 inches (about 7.62 to about 8.19 millimeters).

[c13] 13.A tip shroud for use with a bucket of a turbine, comprising:
a seal rail;
said seal rail comprising a middle portion; and
a first cutter tooth mounted on said seal rail about said middle portion and a second cutter tooth mounted on said seal rail about said middle portion;
said first cutter tooth and said second cutter tooth being offset along said middle portion on said seal rail.

[c14] 14.The tip shroud of claim 13, wherein said first cutter tooth is positioned about 2.15 to about 2.20 inches (about 54.61 to about 55.88 millimeters) from a first end of said seal rail while said second tooth may be about 2.13 to about 2.18 inches (about 54.1 to about 55.37 millimeters) from said first end.

[c15] 15. A tip shroud for use with a bucket of a turbine, comprising:

- a seal rail;
- a first cutter tooth mounted on said seal rail at about a middle portion thereof;
- said first cutter tooth comprising a first base with a first length; and
- a second cutter tooth mounted on said seal rail at about said middle portion thereof;
- said second cutter tooth comprising a second base with a second length;

wherein said first length exceeds said second length.